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FOUR NEW LARVAL MITES (ACARI: TROMBIDIIDAE: EUTROMBIDIINAE) ECTOPARASITIC ON CARABIDS (INSECTA: COLEOPTERA: CARABIDAE).

RYSZARD HAITLINGER[1]

ABSTRACT

Four species are described as new for science: *Beronium marittae* n. sp. from Chile found on *Ceroglossus sybarita, C. darwini, C. valdiviae* und *C. suturalis; B. sorayae* n. sp. from China found on *Carabus grandis; B. lubomirae* n. sp. from Sumatra and Madagascar found on *Pheropsophus javanus* and *P. discicollis* and *B. veronicae* n. sp. from Canary Islands (Teneriffe) found on *Licinopsis alternans*. A key for the genus *Beronium* is given.

RESUMEN

Se describen 4 nuevas especies: *Beronium marittae* n. sp. capturado en Chile sobre *Ceroglossus sybarita, C. darwini, C. valdiviae* y *C. suturalis; B. sorayae* n. sp. capturado en China sobre *Carabus grandis*; *B. lubomirae* n. sp. capturado en Sumatra y Madagascar sobre *Pheropsophus javanus* y *P. discicollis* y *B. veronicae* n. sp. capturado en Islas Canarias (Teneriffe) sobre *Licinopsis alternans*. Se entrega una clave para el reconocimiento de las especies de *Beronium*

INTRODUCTION

Ewing in 1925 described the larval species *Hoplothrombium quiquescutatum.* It was "described from a single specimen adhering to beetle mite (?) taken from the stomach of a toad (*Bufo americanus* Holbrook)". Revision of the species was made by Vercammen Grandjean (1967). Beron (1973) described the second larval species *Hoplothrombium coiffaiti* from Morocco. larvae of the new species were collected on *Pristonychus colbi* Coiff. (Carabidae) . Southcott (1986a) erected a new genus *Beronium* only for *Hoplothrombium coiffaiti* Beron an eyless larva described from cavernicolous Moroccan coleopteran. According to Southcott, *B. coiffaiti* appears to be a member of the subfamily Eutrombidiinae.

In this paper four new species of the genus *Beronium* are described, all gathered from carabid beetles in Chile, China, Sumatra, Madagascar and Canary Islands. A definition of the genus and a key to all species are given. The terminology of structure and setal notation are adopted from Southcott (1986a, b). The new species are deposited in the Museum of Natural History, Wroclaw University (MNHWU); Institute of Zoology, Polish Academy of Science, Warsaw (IZPAS) and Institute of Systematic and Experimental Zoology, Polish Academy of Sciences, Cracow (ISEZPAS).

All measurements are given in micrometers (nm).

[1]Department of Zoology, Wroclaw Academy of Agriculture, ul. Cybulskiego 20, 50-205 Wroclaw, Poland

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RESULTS

Genus *BERONIUM* Southcott, 1986

Type species: *Hoplothrombium coiffaiti* Beron, 1973

Definition. Eyes present or absent. Ocular plate always present. Dorsum of idiosoma with 5 median shields. The first shield is the largest and bearing the following smooth or barbed setae: scutalae 2 AM, 2 AL, 2 PL and 2 sensillae. The remaining shields bearing 2 setae each. The first of these shields is distinctly larger than the remaining ones. Sternalae I, as "migrated" setae beyond coxae I or on them. Coxal formula: 1-2, 1, 1. Coxae I-III with coxalae contracted to ridged stumps. If coxa I bears two setae, one of them is spiniform. Tarsus I, II normal; tarsus III with 2 claws supported by ventrally directed setulose seta arising from a long, dorsal projection of tarsus. Mouth opening circular, chitinized.

Remarks. Southcott (1986a) in his definition of the genus stated that the eyes were absent. This definition was based on a single species. The new species described below bear eyes, except *B. veronicae*, but in this apecies an ocular plate is visible. Also coxae I does not always bear two setae because one of them, the "migrated" seta is beyond the coxa in some species.

BERONIUM MARITTAE n. sp.

(Figs 1-5)

Diagnosis. Setae PL thin and short, placed distinctly below bases of sensillae. The distance (AP) between AL and PL over 50, setae AL over 40, ratio AW/POL over 1.90, the number of ventral setae 18. Dorsal setae, except PPG very slightly barbed.

Larva. The body is elongated, distinctly longer than wide. Scutum as in Fig. 1 bears relatively thick setae AL and thinner setae PL and AM. Setae AL are about twice or more longer than PL. Sensillae are relatively thick and are nude, over 80. Setae PL are placed in the posterior edges of scutum. Two pairs of eyes are placed on separate shield near the posterior margin of scutum. Three of shields (scutella) have two setae each. The first scutellum is longer and wider than other ones. The pygidial plate, conventionally called "pygalaspis" bears a pair of weakly barbed setae (POL), the distance between their bases (POW): 26-30. A pair of setae at pygidial plate placed on two small plates, conventionally called "parapygalaspis", are distinctly visible (PPG) and bear setules. Seven pairs of setae are beyond dorsal plates.

The ventral setae are placed behind coxae III in two longitudinal rows. The first row have 5 setae, the second row bears four setae. Some specimens have one, relatively thick seta at the postero-lateral margins (Fig. 2).

Gnathosoma with relatively short palps. Palptarsus is barely visible. At the base of palpfemur are flat setae, according to Vercammen-Grandjean (1967) they are probably drastically modified gnathobasal setae (Fig. 2).

Leg I. Coxae: triangular contiguous to coxa II, with a large urstigma having one enlarged and flat seta as in Fig. 2. The second seta behind coxa near its lateral margin. According to Vercammen-Grandjean it is probably a migrated sternal seta. Tarsus with two specialized setae: minute famala and about twice longer solenidion both situated as in Fig. 3, and 18 normal setae, of which only one dorsal seta is barbed (two setules). Ti - 7, Ge - 5, Fe - 6, Tr - 1, all setae are smooth.

Leg II. Tarsus II is distinctly shorter than Ta I and bears 1 So and 1 barbed seta with two setules, the remaining ones are smooth; total 14 setae, Ti - 6, Ge - 3, Fe - 5, Tr - 1, all setae are smooth. Coxa with broad and flat seta (Fig- 4).

Leg III (Fig. 5). Tarsus distinctly enlarged with long and curved claw and short and thick claw. It bears total ~10 setae from which one seta is long and barbed; Ti - 5. Ge - 3, Fe - 4, Tr ~ 1, all these setae are smooth.

Metric data of holotype and paratypes on Table 1.

Material. Holotype, larva, Chile, from *Ceroglossus sybarita* Gerst.. Paratypes: 4 1. from *C. sybarita*; 4 1. from *C. suturalis* Fabr.; 2 1. from *G, valdiviae* Hoppe, Valdivia; 2 1 from *C. darwini* Hoppe, all specimens from Chile. Holotype in IZPAS, paratypes in author's collection.

BERONIUM SORAYAE n. sp.

(Figs 6-11)

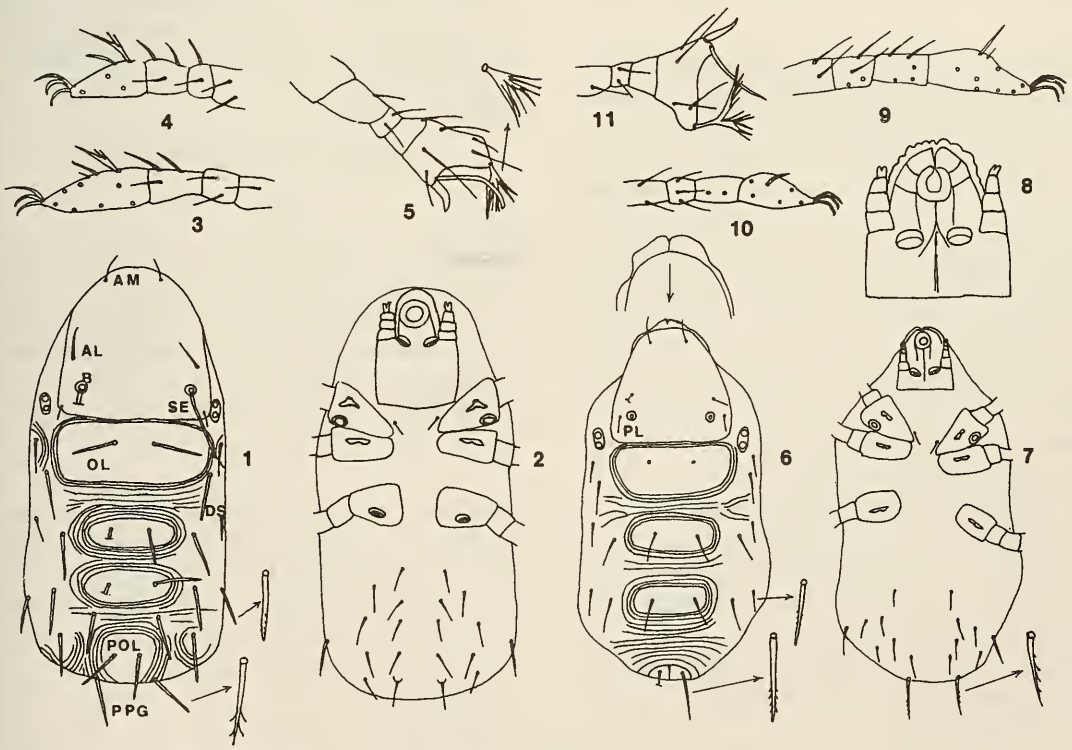
Diagnosis. Setae PL thin and short placed on the same level as bases of sensillae. AP below 35, setae POL below 95, OW III below 75, OL III below 80, setae OL III and POL distinctly barbed. Pygidial plate is divided. Two pairs of eyes present.

Larva. The body distinctly longer than wide. Scutum as in Fig. 6 with three pairs of scutalae, thin and short; of them setae AL and AM are about 1.5 times longer than PL. Sensillae are damaged. Setae PL are placed on the same level as bases of sensillae. Two pairs of eyes are present at posterolateral margins of scutum. The first scutellum is longer and wider than other one ones. It bears two setae (damaged). Also scutella II and III bear two setae each; these setae are slightly barbed. Pygidial plate (pygalaspis) is divided. Setae POL are distinctly barbed and longer than setae PPG. The last setae have four distinctly visible setules.

Twelve ventral setae placed behind coxae III are smooth. Sternal setae I are present (these "migrated" setae are placed distinctly behind coxae I).

Gnathosoma. Palps short, palptibia with bifid claw, palptarsus is badly visible, no setae on the genua. At the basis of palpfemur are placed flat setae (Fig. 7). In front of gnathosoma is slightly visible integument.

Leg I. Coxa with one flat and enlarged seta; "migrated" seta as sternalae I is behind coxa. Tarsus with 1 Fa, 1 So and ~16 other setae, Ti - 2 So, 1 Vs, 6; Ge - 1 So, 5; Fe - 6; Tr - 1; all setae are smooth,



Figures 1-11: *Beronium marittae* n. sp.: 1. Idiosoma, dorsal view; 2. Idiosoma, ventral view; 3. Leg I, tarsus-femur; 4. Leg II, tarsus-femur; 5. Leg III, tarsus-trochanter. *Beronium sorayae* n. sp.: 6. Idiosoma, dorsal view; 7. Idiosoma, ventral view; 8. Gnathosoma; 9. Leg I, tarsus-femur; 10. Leg II, tarsus-femur; 11. Leg III, tarsus-femur.

Leg II. Coxa with one flat seta; Ta - 1 So, ~13 setae; Ti -2 So, 5; Ge - 3; Fe - 5; Tr - 1; all setae are smooth.

Leg III. Coxa with one flat seta; Ta - 10, of them one seta is branched; Ti - 5; Ge - 3; Fe - 4; Tr - 1; all setae except one are smooth.

Metric data of holotype and paratypes as in Table 2.

Material. Holotype, larva, China (?Tohe-Kiang), from *Carabus grandis*; paratypes: 2 l. same data as in holotype. All specimens are deposited in ISEZPAS.

BERONIUM LUBOMIRAE n, sp.

(Figs 12-13)

Diagnosis. Setae PL thin and short placed on the same level as bases of sensillae. AL below 35, POL over 100, OW III over 75, OL III over 80, setae OL III and POL are slightly barbed, setae PPG with two - four setules. Pygidial plate not divided. Two pairs of eyes are present.

Larva. The body distinctly longer than wide. Scutum as in Fig. 12 with thin setae AL about twice longer than thin setae PL. Setae AM are thin. Two pairs of eyes are placed on plate at the posterior margin of scutum. The first pair of dorsal plate (scutellum) is distinctly longer and wider than other ones and bears two setae shorter than length of scutellum. Scutella II, III are weakly rounded, setae on both scutella are distinctly longer than length of these plates. Setae on scutella I, II are very slightly barbed on the tip, setae OL III are distinctly barbed as in Fig. 7. Setae on pygidial plate (POL) are slightly barbed. Setae PPG with two setules in specimens from Sumatra and somewhat more in specimens from Madagascar (about 4). Setae placed behind dorsal shields are weakly barbed, their length: 20-74.

Ventral side of idiosoma with twelve small and thin setae and two thicker setae at posterolateral margins (Fig. 13). Sternalae I are set on small platelets.

Gnathosama. Mouth opening circular, chitinized. Palps short, palptarsus badly visible. At the bases of palpfemur are placed flat setae.

Leg I. Coxa with one flat and enlarged seta and urstigma. Ta - 1 Fa, 1 So,~16; Ti - 2 So, 6; Ge - 5; Fe - 5; Tr - 1; all setae are smooth.

Leg II. Coxa with one flat and enlarged seta. Ta - 1 So, ~13 (among them 1 B); Ti - 2 So, 5; Ge - 3; Fe - 5; Tr - 1; all setae are smooth, except one seta on tarsus.

Leg III. Coxa with one flat and enlarged seta. Tarsus enlarged with about 11 setae, one of them is relatively long and branched; Ti - 5; Ge - 3; Fe - 4; Tr - 1.

Metric data of holotype, paratypes and other specimens on Table 3.

Material. Holotype, larva, Sumatra, from *Pherosophus javanus.*

Paratypes: 2 l., same data as in holotype. Other specimens: 2 l., Madagascar, from *P. discicollis* Dej. Holotype and paratypes in MNHWU, specimens from Madagascar in author's collection.

BERONIUM VERONICAE n. sp.

(Figs 14-17)

Diagnosis. Setae PL relatively thick and long, setae AL and PL below 55, setae OL I below 50. Setae PL placed behind bases of sensillae. Setae on coxae III thick and weakly elongated. Sternalae I on coxae I. Ratio PSL/OL I over 2.40. Eyes absent. The number of ventral setae about 24.

Larva, The body is elongated, distinctly longer than wide. Scutum as in Fig. 14 with relatively thick and long setae PL, placed behind bases of sensillae. Setae PL are somewhat shorter than AL, both are barbed. Setae AM are thin, smooth and shorter than above mentioned setae. Sensillae are rather thin, nude and about 100 long. Eyes absent but ocellar plate is visible. Three pairs of shields (scutella) with two pairs of setae each. The

first shield is relatively long (over 100) and bears two short setae, shorter than the same setae on remaining ones. Dorsal setae are barbed. Pygalaspis is oval and bears two setae POL, subequal to setae PPG. Setae POL are weakly barbed. Setae PPG have relatively long setules.

Ventral side of idiosoma bears 24 setae which are placed behind coxae III. Anal slit is visible, Sternal setae absent; "migrated" setae are present on coxae I (Fig. 15).

Gnathosoma with short palps. Palptarsus is barely visible. At the bases of palpfemur are flat setae. Palptibia bears bifid claw (Fig. 15).

Leg I. Coxa with two setae; thick seta and thin seta as in Fig. 15. Ta - 1 Fa, 1 So, ~13 (among them 3 setae are barbed); Ti - 2 So, 6 (3 B); Ge - 1 So, 5 (1 B); Fe - 5(1 B); Tr - 1 (Fig. 16).

Leg II. Coxa with one flat and enlarged seta; Ta - 1 So,~11 (6 B); Ti - 2 So, 5 (3 B); Ge - 1 So, 2 B; Fe - 4 (1 B); Tr - 1.

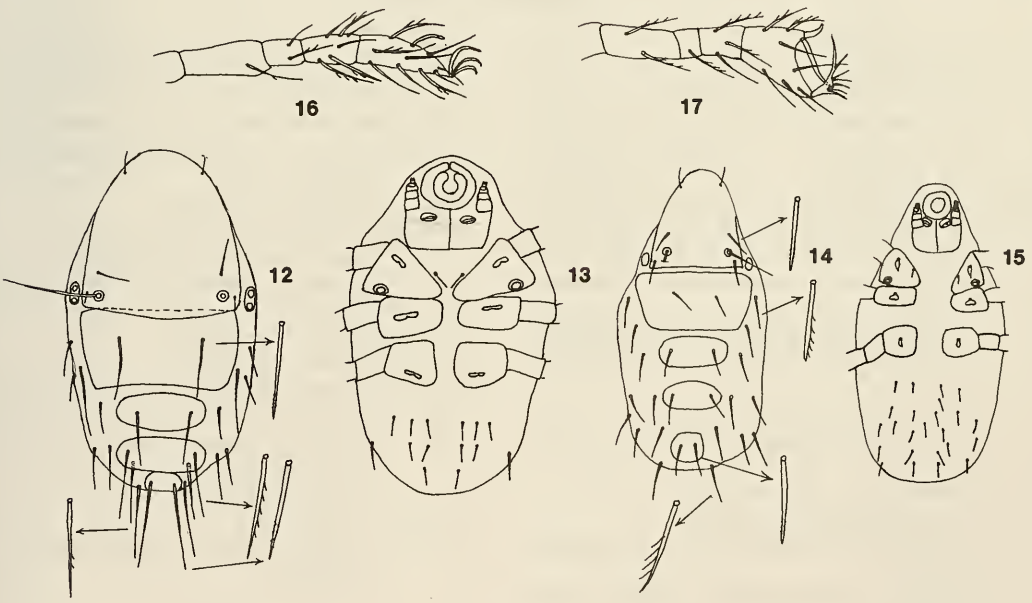
Leg III. Coxa with one stout seta; Ta - ~ 13 (5 B); Ti - 5 (1 B) Ge - 3; Fe - 4 (1 B); Tr - 1 (Fig. 17).

Metric data of holotype and paratypes on Table 4.

Material. Holotype, larva, Canary Islands, Teneriffe, from *Licinopsis alternans*. Paratypes: 2 l. the same data as in holotype. All specimens are deposited in MNHWU.

KEY FOR SPECIES DETERMINATION

1 (4). Setae PL relatively thick and long (over 30), setas on coxae III thick and weakly elongated, eyes absent.



Figures 12-17: *Beronium lubomirae* n. sp.: 12: Idiosoma, dorsal view; 13. Idiosoma, ventral view. *B. veronicae* n.sp.: 14. Idiosoma, dorsal view; 15. Idiosoma, ventral view; 16. Leg I, tarsus-femur; 17. Leg III, tarsus-femur

2 (3). Setae AL and PL below 55, ratio PSW I/PSL I below 1.80, ratio PSL I/OL I over 2.40, setae OL I below 50 ..... *Beronium veronicae* n. sp., Canary Islands.

3 (2). Setae AL and PL over 60, setae OL I over 60, ratio PSW I/PSL I over 1.90, ratio PSL I/OL I below 1.50 ..... *B. coiffaiti* (Beron, 1973), Morocco.

4 (1). Setae PL thin and short (below 25). setae on coxae III very flat, eyes present.

5 (6). Setae POL below 70, AP over 50, MA below 85, AL over 40, ratio AW/POL over 1.90, fV~18 ..... *B. marittae n. sp.*, Chile

6 (5). Setae POL over 80, AP below 40, MA over 90, AL below 40, ratio AW/FOL below 1.80, fV ~ 12-14.

7 (8). Pygidial plate divided, setae POL below 95, OW III below 75, OL III below 80, setae OL III and POL distinctly barbed ..... *B. sorayae n, sp.*, China.

8 (7). Pygidial plate not divided, setae POL over 100, OW III over 75, OL III over 80, setae OL III and POL very slightly barbed. ..... *B. lubomirae n.* sp., Sumatra, Madagascar.

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ABBREVIATIONS

L = length of scutum
W = width of scutum
AW = distance between centres of bases of anterolateral scutal setae
PW = distance between centres of bases of posterolateral scutal setae
AMB = distance between centres of bases of AM setae
AP = distance between centres of AL and PL setae on each side of anterior dorsal sautum
MA = distance between centres of bases of AM and AL setae
LN = distance between anterior end of anterior dorsal scutum and centre point between centres of AM setae
ASB = distance between anterior end of anterior dorsal scutum and the midpoint between the sensilla bases
PSB = distance between level of centres of sensilla and posteromost point of that scutum
AM = length of anteromedian seta of anterior dorsal scutum
AL = length of anterolateral seta of anterior dorsal scutum
PL = length of posterolateral seta of anterior dorsal scutum
SE = length of scutal sensillary setae
MS = distance between centres of sensilla and centres of AM setae
SB = distance between centres of sensillary sockets
DS = length of setae on dorsal integument (beyond shields)
OS = length of ocular sclerite
PSW = width of dorsal scutella I, II, III
PSL = length of dorsal scutella I, II, III
OW = distance between centres of the two medial setae
OL = length of medial setae
PGL = length of pygidial plate
PGW = width of pygidial plate
POW = distance between bases of centres of POL setae
POL = length of pygidial seta
PPG = length of seta placed beyond or at posterior margin of pygidial plate
GL = length of gnathosoma
Ta (H)= height of tarsus
Ta (L)= maximum length of tarsus, exclusive of claws and pedicle

TABLE 1

METRIC DATA FOR *BERONIUM MARITTAE* N. SP., LARVA, HOLOTYPE (H) AND PARATYPES (P) FROM *CEROGLYSSUS SYBARITA*, *C. SUTURALIS*, *C. VALDIVIAE* AND *C. DARWINI* (MEASUREMENTS IN MICROMETERS).

	H	P		H	P
Length of body	496	368-656	PGW	48	48-66
Width of body	248	184-380	POW	26	26-30
L	184	172-192	POL	60	56-62
W	170	154-180	PPG	60	56-72
AW	134	124-140	GL	124	120-140
PW	158	140-170	Ta I(L)	74	64-76
AMD	82	72-104	Ta I(H)	28	24-30
AP	60	56-64	Ti I	34	26-38
MA	80	62-82	Ge I	22	20-24
LN	40	36-52	Fe I	62	50-62
ASB	160	144-160	Tr I	34	32-40
PSB	24	24-32	Cx I	78	68-86
AM	24	20-40	Ta II	damaged	44-56
AL	46	42-52	Ti II	"	22-30
PL	20	18-22	Ge II	"	14-18
SE	90	86-90	Fe II-	"	36-52
MS	120	112-130	Tr II	"	26-38
SB	122	108-142	Cx II	58	54-64
DS	30-50	22-56	Ta III (L	54	44-56
OS	30	26-32	Ta III (W)	52	48-56
PSW I	164	160-182	Ti III	20	20-26
PSL I	70	62-82	Ge III	16	12-16
OW I	58	52-72	Fe !II	38	34-44
OL I	40	36-44	Tr III	44	30-48
PSW II	104	100-126	Cx III	60	56-70
PSL II	48	34-48	Coxala I	14	14-22
OW II	44	40-54	AW/AP	2.23	2.03-2.26
OL II	40	40-52	AW/AL	2.91	2.40-3.09
PSW III	102	100-122	PSW I/PSL I	2.34	2.22-2.75
PSL III	36	34-44	POL/III	1.20	1.07-1.29
OW III	60	52-74	AW/POL	2.23	1.93-2.32
OL III	50	48-56	PSL I/OL I	1.75	1.55-1.89
PGL	48	34-50	OL I/OL II	1.00	0.78-0.83

TABLA 2
METRIC DATA FOR *BERONIUM SORAYAE* N.SP., LARVA, HOLOTYPE (H) AND PARATYPES (P)

	H	P	P		H	P	P
Length of body	576	640	336	PGL	damaged	42	38
Width of body	320	328	192	PGW	56	54	60
L	202	208	184	POW	26	damaged	24
W	178	190	166	POL	90	90	82
AW	142	134	136	PPG	70	72	70
PW	174	164	180	GL	130	106	126
AMB	82	82	80	Ta I L	66	66	64
AP	32	32	28	Ta I H	24	28	24
MA	104	102	96	Ti I	32	36	32
LN	46	damaged	92	Ge I	20	20	18
ASB	174	184	154	Fe I	48	54	50
PSB	28	24	30	Tr I	42	36	34
AM	30	damaged	34	Cx I	76	76	68
AL	32	30	28	Ta II	44	48	44
PL	18	20	18	Ti II	28	32	26
SE	dam.	damaged	dam.	Ge II	16	18	14
MS	150	130	128	Fe II	38	34	30
SB	140	132	128	Tr II	40	42	34
DS	damaged	30-64	30-62	Cx II	54	60	52
OS	damaged	30	28	Ta III L	46	44	48
PSW I	192	180	170	Ta III W	60	56	56
PSL I	82	68	70	Ti III	22	20	18
OW I	damaged	78	76	Ge III	16	16	12
OL I	damaged	?50	dam.	Fe III	36	32	34
PSW II	120	damaged	106	Tr III	40	38	34
PSL II	damaged	dam.	30	Cx III	52	60	52
OW II	60	"	44	St I	damaged	26	30
OL II	60	"	dam.	AW/AP	4.43	4.19	4.44
PSW III	100	"	104	AW/AL	4.44	4.47	4.86
PSL III	36	"	34	PSW I/PSL I	2.34	2.65	2.43
OW III	66	"	72	POL/OL III	1.50	-	1.14
OL III	60	?52	72	AW/POL	1.58	1.49	1.66

TABLE 3
METRIC DATA FOR *BERONIUM LUBOMIRAE* N. SP., LARVA, HOLOTYPE (H), PARATYPES (PS) FROM SUMATRA (6 SPECIMENS) AND MADAGASCAR (PM)(2 SPECIMENS).

	H	PS	PM	PM		H	PS	PM	PM
Length of body	408	404-704	616	592	PGW	44	44-52	50	52
Width of body	224	208-408	324	324	POW	24	22-26	26	24
L	196	180-198	218	202	POL	102	102-114	104	110
W	174	164-184	180	180	PPG	88	74-86	68	dam
AW	142	138-150	142	142	GL	124	110-134	146	142
PW	168	160-180	170	174	Ta I L	70	60-70	64	62
AMB	84	74-84	104	88	Ta I H	28	26-30	26	dam.
AP	30	28-32	32	34	Ti I	40	34-38	38	38
MA	108	98-114	108	98	Ge I	24	22-24	20	22
LN	30	36-44	52	44	Fe I	52	50-60	44	42
ASB	174	160-190	190	178	Tr I	40	36-40	42	44
PSB	22	20-24	28	24	Cx I	76	70-80	74	80
AM	34	42-44	40	dam.	Ta II	48	48-56	dam.	46
AL	32	32-38	dam.	36	Ti II	30	28-32	"	26
PL	16	14-16	18	dam.	Ge II	20	16-20	"	18
SE	116	100-116	dam.	"	Fe II	48	44-52	"	32
MS	134	124-146	136	150	Tr II	40	34-44	"	32
SB	136	128-144	136	134	Cx II	54	52-56	"	56
DS	28-64	20-74	32-70	20-70	Ta III L	50	40-46	48	44
0S	32	30	28	28	Ta III W	60	62-64	58	66
PSW I	174	172-202	192	202	Ti III	22	18-22	20	24
PSL I	74	72-82	84	90	Ge III	16	14-16	14	14
OW I	90	80-100	92	94	Fe III	40	38-48	32	36
OL I	56	54-60	dam.	dam.	Tr II	42	30-40	44	dam.
PSW II	112	112-126	120	114	Cx III	54	50-52	64	60
PSL II	32	36-40	42	40	St I	32	24-34	40	30
OW II	62	54-68	66	56	AW/AP	4.73	4.69-5.14	4.43	4.19
OL II	68	74	74	68	PSW I/PSLI	2.35	2.10-2.52	2.28	2.24
PSW III	120	106-114	116	104	POL/OL III	1.21	1,26-1,34	1.24	1.37
PSL III	36	36-44	40	40	AW/POL	1.39	1.23-1.41	1.36	1.29
OW III	86	78-94	dam.	76	PSL I/OL I	1.32	1.20-1.41	-	-
OL III	84	80-90	84	80	OL I/OL II	0.82	0.73-0.81	-	-
PGL	36	28-32	30	dam.					

TABLE 4
METRIC DATA FOR *BERONIUM VERONICAE* N. SP., LARVA, HOLOTYPE (H) AND PARATYPES (P).

	H	P	P		H	P	P
Length of body	552	816	776	PGW	52	52	54
Width of body	256	432	damaged	POW	30	36	30
L	182	184	192	POL	62	76	damaged
W	166	164	184	PPG	70	72	72
AW	124	128	138	GL	104	damaged	124
PW	156	154	178	Ta I L	76	78	80
AMB	62	64	66	Ta I H	24	damaged	28
AP	46	44	46	Ti I	44	44	48
MA	100	102	100	Ge I	26	26	28
LN	46	damaged	44	Fe I	62	68	72
ASB	160	160	166	Tr I	34	36	42
PSB	22	24	26	Cx I	68	damaged	74
AM	30	26	30	Ta II	60	58	60
AL	44	44	50	Ti II	36	32	36
PL	40	40	42	Ge II	20	20	18
SE	104	damaged	dam.	Fe II	46	42	52
MS	134	136	136	Tr II	40	damaged	40
SB	124	124	138	Cx II	60	damaged	60
DS	40-60	50-60	50-66	Ta III L	damaged	54	60
OS	damaged	32	34	Ta III W	damaged	46	50
PSW I	184	188	200	Ti III	32	damaged	30
PSL I	106	114	120	Ge III	16	damaged	16
OW I	56	60	60	Fe III	56	damaged	56
OL I	36	44	44	Tr III	42	damaged	44
PSW II	120	114	130	Cx III	damaged	damaged	64
PSL II	40	42	40	Coxala I	8	damaged	12
OW II	56	54	66	AW/AP	2.69	2.91	3.00
OL II	54	60	dam.	AW/AL	2.82	2.91	2.76
PSW III	100	110	dam.	PSW I/PSL I	1.73	1.65	1.67
PSL III	48	48	dam.	POL/OL III	1.03	1.22	-
OW III	48	48	dam.	AW/POL	2.00	1.68	-
OL III	60	62	66	PSL I/OL I	2.94	2.59	2.73
PGL	50	48	50	OL I/OL II	0.67	0.73	-